



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/043,644	01/10/2002	Donald B. Craig	29143-03	5981

7590 10/22/2003

Joseph T. Guy, Ph.D.
Nexsen Pruet Jacobs & Pollard, LLC
PO Drawer 10648
Greenville, SC 29603-0648

EXAMINER

ANDREWS, MELVYN J

ART UNIT	PAPER NUMBER
----------	--------------

1742

DATE MAILED: 10/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/043,644

Applicant(s)

CRAIG ET AL.

Examiner

Melvyn J. Andrews

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-63 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-37, 40, 41 and 45-63 is/are allowed.
- 6) ☒ Claim(s) 38, 39 and 42-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 38, 39, 42, 43 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fisher et al (US 5,033,531). The patent to Fisher et al discloses a filter for filtering molten iron including an inoculant for molten iron including ferrosilicon mixed with a material such as a rare-earth (col.8, lines 20 to 63) but does not explicitly disclose the carrier (ferrosilicon) comprises at least 30% ferrosilicon but Fisher et al disclose a filter with particles of an inoculant having a composition of 65 % silicon, 1.4 %, aluminum, 1.4 % calcium, 4 % manganese, 3.75 % zirconium and balance iron (col.5, lines 16 to 28) so that it would have obvious to one of ordinary skill in the art that the Fisher et al inoculant comprises at least 30 % silicon and iron.

With respect to Claims 42 and 43 the determination of the optimum or workable ranges of the alloy is obvious since it is a result effective variable. *In re Boesch*, 205 USPQ 215

Response to Arguments

Applicant's arguments filed July 28, 2003 have been fully considered but they are not persuasive. Applicants argue that the concept of a pellet is not disclosed by Fisher et al but it is the Examiner's position that Fisher et al discloses an inoculant selected from ferrosilicon and aluminum or rare earth and states that the "size of the inoculant particles may be up to about 10 mm" (col.2, line 63 to col3, line 18) in view of which the

Art Unit: 1742

claimed "inoculant pellet" is obvious because the size and shape of the claimed "inoculant pellet" does not patentably differ from the size or shape of the Fisher inoculant, in any case it has been held that the size of an article ordinarily is not a matter of invention *In re Rose*, 105 USPQ 237

Claims 38, 39, 42, 43 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fisher et al (US 5,033,531) as applied to claims 38, 39, 42, 43 and 44 above, and further in view of Williamson (US RE37,520). The patent to Fisher et al discloses "particles of an inoculant" not an "inoculant pellet" as claimed but Williamson discloses an ferrosilicon inoculant which may be in the form of chunks, pellets, powder or other granular form of inoculant (col.7, lines 18 to 25), Cole et al discloses magnesium ferrosilicon as a nodularizing agent in particulate or lump form (col.6, lines 17 to 39), as well as, magnesium ferrosilicon pellets (col.6, line 62) and McWhorter et al (US 4,162,917) discloses a nodulizing agent is a mechanical mixture of granular ferrosilicon and atomized magnesium formed into pellets (col.2, lines 11 to 42) it would have been obvious to one of ordinary skill in the art at the time the invention was made to form a ferrosilicon inoculant such as disclosed by Fisher et al, into pellets since such pellets will function as nodularizing agents to treat molten iron.

Claims 39 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Teufel (US 3,881,937). Teufel discloses a shaped body inoculation means (col.2, line 59 to col.3, line 29 and Figs 1 and 2) which comprises a stem or peg 6 comprising ferrosilicon and aluminum as in Claims 39 and 44 but does not explicitly disclose an "inoculant pellet" but the stem or peg is considered the structural and functional

Art Unit: 1742

equivalent because it has been held that the size of an article is not a matter of invention *In re Rose*, 105 USPQ 237 .

Allowable Subject Matter


Claims 1-37, 40, 41 and 45-63 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: Fisher et al, Williamson, Cole et al, McWhorter et al or Teufel do not disclose or suggest a filter which only allows particles below 10 μ to pass there through; an assembly comprising a pellet and a filter wherein the ratio of mass of the pellet to surface area of the filter is at least 0.75 to no more than 1.5 and a pellet having a dissolution rate of at least 1 mg/sec to no more than 320 mg/sec.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melvyn J. Andrews whose telephone number is 703-308-3739. The examiner can normally be reached on 8:00A.M. to 4:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy V King can be reached on 703-308-1146. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.


MELVYN ANDREWS
PRIMARY EXAMINER

mja
October 16, 2003